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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,455	12/17/2001	Takao Ohnishi	796 007	2269
25191	7590	05/05/2005	EXAMINER	
BURR & BROWN			LUDLOW, JAN M	
PO BOX 7068			ART UNIT	PAPER NUMBER
SYRACUSE, NY 13261-7068			1743	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,455

Applicant(s)

OHNISHI ET AL

Examiner

Jan M. Ludlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 3 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While the disclosure contains literal support for the claim language, there is no enabling description of how liquid jetted outside the supports is "used" for judgment as to whether the injection units operate properly.

2. Claims 3 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 3 and 9 now recite that "spot-forming liquid is jetted...to evaluate whether the injection units operate properly," but the original disclosure states that "the spot-forming liquid jetted...is used for judgment as to whether the state of jetting is proper." That is, the liquid jetted, and not the act of jetting, is used to evaluate whether the state of jetting is proper in the disclosure as originally filed. The new matter added to claims 3 and 9 should be deleted in response to this action.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 7 and 13, the scope of the claims is unclear because while the preamble recites "a method of forming detection-spots," it also recites "detecting a

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specific component..." whereas no detection step is recited in the body of the claim.

For purposes of examination, the claims have been treated as claiming a method of forming detection spots.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-2, 5-6, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/22867 (hereafter WO).

WO teaches a method of making arrays on plural array regions by jetting (e.g., p. 4, line 32) from modules 76, 80, each having plural jetting heads 38, 40, wherein the respective "supports" are the rows of rectangular areas shown (Figure 5). The heads may be arrayed in an NxM array with spacing corresponding to the sum or difference of the spacing between different regions (p. 2, lines 4-9). Deposition is in "parallel" (p. 5, line 26), which Webster's defines as relating to tasks performed simultaneously (p. 853, ²parallel, definition 2c).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO as applied to claims above, and further in view of Gamble and/or Hirota.

WO fails to teach a piezoelectric ink jet device of the claimed structure.

Gamble (Figs. 2-3) and/or Hirota (Fig. 2) teach piezoelectric ink jet devices for producing arrays.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ink jet device of Gamble and/or Hirota in the method of WO in order to provide a known ink jet device for forming arrays for its known purpose, the use of an ink jet being taught by WO.

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10. Claims 7-8, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO as applied to claims above, and further in view of Bass.

WO fails to teach cutting the substrate to form separate chips.

Bass teaches a multiple ejector method for making arrays similar to that of WO. After formation of plural arrays, the substrate is cut to make separate chips (Fig. 6).

It would have been obvious to cut the substrate(s) of WO in order to form separate chips as taught by Bass.

11. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO and Hirota and/or Gamble as applied to claims above, and further in view of Bass.

WO fails to teach cutting the substrate to form separate chips.

Bass teaches a multiple ejector method for making arrays similar to that of WO. After formation of plural arrays, the substrate is cut to make separate chips (Fig. 6).

It would have been obvious to cut the substrate(s) of WO in order to form separate chips as taught by Bass.

12. Applicant's arguments filed February 14, 2005 have been fully considered but they are not persuasive.

13. Applicant argues that evaluating whether the jetting units are operating properly can be based on whether the jetting units outside the supports are operating properly. This is not what is described in the specification. The specification states that the liquid jetted from the injection units located outside the supports "can be used for judgment as to whether the state of jetting is proper." There is no description of HOW the liquid jetted can be used for this purpose. For example, is the size or optical density of a spot

used to determine proper operation, or flow rate and time (i.e., total volume ejected)? In that the specification as filed doesn't explain how to "use" the jetted liquid, the disclosure is not enabling.

14. Applicant argues that Figure 4A of WO '867 shows single heads forming single spots on separate supports, but Figure 5 of the same reference shows plural modules, each with plural heads, simultaneously (i.e., in parallel) forming spots on different row-shaped substrate areas, constituting the instant "supports".

15. Applicant argues that there is no motivation to divide the areas of WO '867 as described in Bass, but in WO '867, the "supports" are contiguously partitioned areas of substrate 61, and Bass teaches slicing the contiguous areas apart.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow
Primary Examiner
Art Unit 1743

Jml
May 1, 2005